



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

July 20, 1998

EPA Region 5 Records Ctr.



229877

REPLY TO THE ATTENTION OF

SR-6J

Mr. Clifton A. Lake, Esquire
McBride, Baker & Coles
500 West Madison Street
40th Floor
Chicago, Illinois 60661-2511

**VIA FACSIMILE AND
REGULAR MAIL**

Dear Mr. Lake:

This letter provides comments on the April 1998, Site Investigation Work Plan (Work Plan) for Fansteel, Inc., Number One Tantalum Place, North Chicago, Illinois, prepared by Carlson Environmental, Inc. (CEI). The Work Plan was submitted in response to the February 9, 1998, letter from the United States Environmental Protection Agency (U.S. EPA) regarding Fansteel's Outline of a Work Plan for an Evaluation/Cost Analysis (EE/CA), dated December 8, 1997.

Your April 1998, Work Plan letter responded in part to the comments noted in the U.S. EPA's February 9, 1998, letter. However, further review by this Agency has indicated the following deficiencies that need to be corrected prior to approval of the EE/CA WorkPlan for the Fansteel property.

GENERAL COMMENTS: The following are some of the general comments on the Work Plan.

1. **The Work Plan does not address the U.S. EPA's comment "b" of its February 9, 1998, letter.** The nature and extent of any contamination of sediments in Pettibone Creek from the southern-most property line for the Vacant Lot Site to the property boundary of the Great Lakes Naval Training Center must be evaluated in the context of Fansteel's contribution.
2. **The Work Plan does not address U.S. EPA's general comment #2 of its February 9, 1998, letter, requiring investigation of the nature and extent of contamination of source areas.** Some of the sample locations should be based on any past investigations or past sampling results. Please refer to Figure (2) produced by Carlson Environmental on behalf of Fansteel, Inc.
3. **Table One of the Work Plan does not show any analysis for polycyclic aromatic hydrocarbon (PAH) compounds.** Both the Creek and the Ditch sediment samples should be analyzed for PAH compounds, volatile organic compounds (VOCs) and all the target analyte list (TAL) metals and tantalum. All soil and sediment samples should be analyzed for PAH compounds to effectively compare with U.S. EPA's EE/CA sampling results.
4. **No monitoring wells are proposed in the northern and southern part of Fansteel site (Figure Two of Work Plan), where previous investigations have revealed contamination in soil boring and water samples.** All of the proposed well monitoring locations are at the eastern and western perimeters of the Site property, and hence cannot identify plume boundary

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if it begins in the previously investigated area. Monitoring wells should also be placed along the northern and southern perimeters of the Fansteel property.

5. **Section 6.0 QUALITY ASSURANCE PROJECT PLAN, Page 16:** In order to complete its review and approve the Quality Assurance Project Plan (QAPP), the U.S. EPA must first receive the field sampling and laboratory standard operating procedures (SOPs).
6. **Section 6.0 QUALITY ASSURANCE PROJECT PLAN, Page 16:** Superfund QAPPs should be prepared following the guidance in *REGION 5 SUPERFUND MODEL QUALITY ASSURANCE PROJECT PLAN, Revision 1, May 1996*, rather than the *Region 5 Model RCRA QAPP of May 1993*. Data Quality Objective (DQO) Levels have been eliminated for Superfund projects. The project DQOs should be itemized for each environmental data collecting activity. The reference to "Level II" should be eliminated. Please refer to complete comments on the QAPP below (comments 39 thru 74).
7. **Section 7 HEALTH AND SAFETY PLAN, Page 16:** The Health and Safety Plan (HASP), in its present form, does not meet the relevant Occupational Safety and Health Administration (OSHA) regulations or current U.S. EPA policies. Therefore, this HASP, as currently written, does not allow an employee of the U.S. EPA or its contractor to enter this site under the jurisdiction of this HASP until the above deficiencies are corrected. Please refer to complete comments on the HASP below (comments 75 thru 92).

SPECIFIC COMMENTS: The following are specific comments on the Work Plan.

8. **Section 3.1 VOCs, Page 4:** Please provide a table or tables listing the project required volatile organic compounds (VOCs) and the project required method detection limits (MDLs), practical quantitation limits (PQLs), or reporting limits (RLs) for both soil and groundwater. Please include the site remediation objectives for soil and groundwater.
9. **Section 3.2 Metals, Page 5:** Please provide a table or tables listing the project required Metals and the project required MDLs, PQLs, or RLs for soil and groundwater.
10. **Section 3.2 Metals, Page 5:** Please provide a table or tables listing the project required Metals and cyanide (CN), and the project required MDLs, PQLs, or RLs for creek sediment.
11. **Section 3.2 Metals, Page 5:** Please include the site remediation objectives for soil, groundwater, and creek sediment.
12. **Section 3.2.1, Soil, Page 5:** The third sentence of this section reads "...During the field activities the soil samples will be screened and visually classified." Since the screening is for metals, the method that will be used to screen the collected soil samples should be specified. If this is visual screening, the rationale for selecting a sample should be mentioned.
13. **Section 3.3 PCBs, Page 6:** Please provide a table or tables listing the project required polychlorinated biphenyls (PCBs) and the project required MDLs, PQLs, or RLs for the creek

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and ditch sediments. Please include the site remediation objectives for the creek and ditch sediments.

14. **Section 3.3.1 Creek Sediment, Page 6:** The second sentence of this section reads "Each sample will be analyzed for PCBs". In the previously submitted comments (Comment #11, February 9, 1998, letter), the U.S. EPA requested that samples be analyzed for PAH compounds, pesticides, metals, and PCBs. Please add these additional analysis, which must be performed to adequately characterize the sediment contamination.
15. **Section 4.2.1 Soil, Page 7:** The first sentence "CEI determined the number of proposed sampling locations using a sample grid with 150-foot spacing". Please state details of the grid design used to select sampling locations. Sample locations should also include areas of previously known contamination. Prior investigations conducted at Fansteel should be taken into consideration when choosing locations and evaluating the extent of contamination.
16. **Section 4.2.2 Ground Water, Page 7:** The Work Plan proposes to convert ten of the existing soil borings into groundwater monitoring wells, with seven wells along the site's west boundary, and utilizing one of these wells to monitor southwest flow direction of groundwater. Previous site investigations have revealed that the predominant groundwater flow directions in the site area is towards the south and the southwest direction. The proposed placement of wells completely eliminates monitoring wells on the south side, contrary to the original proposal (Site Investigation Plan). In its previous comments (Comment #7, February 9, 1998, letter), the U.S. EPA had requested placement of 2 monitoring wells, one on the south side and the other on the southwest side of Fansteel site. Please correct the Work Plan accordingly.
17. **Section 4.2.3 Sediment, Page 7:** Please discuss how sample locations will be selected if water is present or flowing in Pettibone Creek or the ditch.
18. **Section 4.3.1 Soil, Page 8:** The second paragraph of this section discusses establishing 32 Geoprobe sample locations and collecting samples using a 48-inch stainless steel sampling tube. Soil samples at a minimum, should be collected from 0-12 inches from all proposed locations.
19. **Section 4.3.1 Soil, Page 8:** The third paragraph of this section states "The borings will be continuously sampled and the geological material will be visually classified." Continuous sampling should be discussed further to indicate at what depths or using what criteria, a sample will be selected for analysis.
20. **Section 4.3.1 Soil, Page 9:** Please discuss in more detail the collection of the VOC sample. Will the project laboratory, Great Lakes Analytical (GLA,) supply all the VOC vials containing the preservatives? Will the samples (~ 5 gram) be weighed in the field? Replicate samples should be collected, in case a re-analysis is needed and another sample vial is necessary for dry weight determination.

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21. **Section 4.3.1 Soil, Page 9:** Sample vials should not contain both preservatives, i.e., methanol and sodium bisulfate. The SW-846 Method 5035 specifies the preservative *sodium bisulfate*, not "sodium bicarbonate", as mentioned here.
22. **Section 4.3.1 Soil, Page 9:** Samples should be collected and tested for effervescence to determine if sodium bisulfate can be used as a preservative.
23. **Section 4.3.2 Ground Water, Page 9:** The Work Plan proposes to collect groundwater samples, and analyze them for VOCs (SW-846 Method 5030). The Work Plan also proposes to use methanol in the preservation of these samples. Please correct this paragraph to delete reference to the use of methanol as a preservative for standard VOC sample preservation of groundwater samples, and substitute the use of hydrochloric acid instead.
24. **Section 4.3.2 Ground Water, Page 9:** Please provide a diagram of the monitoring well.
25. **Section 4.3.2 Ground Water, Page 9:** Bailers are not recommended for sampling. The U.S. EPA recommends low flow sampling techniques.
26. **Section 4.3.2 Ground Water, Page 9:** The U.S. EPA Region 5 strongly recommends groundwater samples be collected unfiltered.
27. **Section 4.3.2 Ground Water, Page 9:** Groundwater field measurements of pH, temperature, and conductivity should also be taken. Please provide field SOPs for these parameters.
28. **Section 4.3.2 Ground Water, Page 9:** Groundwater VOC samples are preserved with hydrochloric or sulfuric acid to pH < 2, not with "methanol".
29. **Section 4.3.2 Ground Water, Page 9:** Discuss VOC sample collection procedure, i.e., full vial, no headspace. If bubbles are present, fill a new vial. Two vials are collected at each sampling location site and placed in a separate plastic bag.
30. **Section 4.3.2 Ground Water, Page 9:** Clarify, or delete, the last sentence. The samples for metals analysis can be filtered after digestion.
31. **Section 4.3.3 Sediment, Page 10:** At the end of the 3rd sentence, please replace "well" with sediment sampling location.
32. **Section 4.3.3 Sediment, Page 10:** The ditch sediment samples are being tested for PCBs and CN. Will separate samples be taken for each test? Please note that the samples should be preserved at 4°C.
33. **Section 5.1 Objectives, Page 12:** The first paragraph of the section states that the site investigations seeks to "determine the nature and extent of potential near-surface soil and groundwater contamination" at the site, and to characterize "sediment samples collected from Pettibone Creek at locations both upstream and downstream from Fansteel outfalls to Pettibone

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Creek.” The U.S. EPA’s previous comments (February 9, 1998, letter), “An EE/CA for the Fansteel property that would identify the nature and extent of the contamination on the Fansteel property, particularly any contamination that may be contributing to the groundwater contamination...” should be the objective. Because underground storage tanks (USTs) were located on site, near surface investigations would not necessarily determine sources of contamination that may impact groundwater.

34. **Section 5.1 Objectives, Page 12:** The second sentence of the second paragraph indicates comparing analytical results to EPA’s Soil Screening Levels (SSL) model with default values or the “Generic Soil Screening Levels for Superfund”. The use of the SSL model requires that the site conditions are same as the scenario used for this model. Care should be taken to account for any deviations in site conditions from the model. It would be more appropriate to use the *Illinois Pollution Control Board’s (IPCB’s) Tiered Approach to Corrective Action Objectives (TACO)*, 35 *Illinois Administrative Code (IAC) Part 742*, requirements for evaluating soil and sediment contamination criteria.
35. **Section 5.1 Objectives, Page 13:** The second sentence of the first paragraph reads “If significant soil contamination or a groundwater contamination plume is detected, an additional investigation may be performed to delineate the contaminant plume”. The term significant contamination requires further description. If contamination above the remediation objective is present, additional investigations must be performed under this Work Plan.
36. **Section 5.2 Technical Approach, Page 13:** In the last paragraph on page 13, the Work Plan proposes to collect six sediment samples from Pettibone Creek as a means of assessing Fansteel outfalls contamination contribution to the Creek. The proposed locations for the sediment samples will not conclusively determine the impact of discharges from the Fansteel property, since the sample points are not located at the discharge outfall of Fansteel (figure three). Comments # 12 and 13 of the U.S. EPA’s February 9, 1998, letter required that samples be collected at the Fansteel outfall, as well as at locations north and south of the outfall. The Fansteel outfalls are situated at an elevated location compared to the Creek bed and collection of a sediment sample at this location would provide insight into past discharges from the outfall. This would also allow for a comparison of contaminant concentrations and a determination of the impact of Fansteel discharges. The collection of sediment samples upstream and downstream of the Fansteel outfalls must assist Fansteel in determining “...the nature and extent of sediment contamination...” in Pettibone Creek.

ATTACHMENT A - Figures and Tables

37. Please include a Summary Table of the Matrices, Analysis, Sample Container, Preservation, and Holding Time Requirements. Please include the Great Lakes Analytical provided sample containers for the VOC soil samples.
38. Please include a sample number summary table listing the matrices, laboratory parameters, field parameters, number of samples, field blanks, field duplicates, trip blanks, and Matrix

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Spike (MS)/Matrix Spike Duplicates (MSDs). This information could be incorporated into TABLE ONE.

ATTACHMENT C - CEI QUALITY ASSURANCE PROJECT PLAN

39. **TITLE/SIGNATURE PAGE:** Please include a signature page with signature lines for all the responsible officials.
40. **Section 1.0, INTRODUCTION, Page 1:** Superfund QAPPs should be prepared following the guidance in *REGION 5 SUPERFUND MODEL QUALITY ASSURANCE PROJECT PLAN, Revision 1, May 1996*. The QAPP should be prepared in Document Control format so revisions can be made without repaginating the entire QAPP. All 14 QAPP Elements should be addressed, however, the information that should be in the QAPP can be referenced from supporting documents, such as, the Work Plan, Field Sampling Plan, etc. The seven step DQO Process should be employed for each of the environmental data gathering activities to define their data requirements. This seven step process is described in EPA QA/G-4 document and outlined in Figure 1-1 of the Region 5 Model QAPP.
41. **The QAPP should include the PROJECT DESCRIPTION Element.** Sections, subsections, tables, figures, and the Executive Summary in the Work Plan can be referenced for the introduction (executive summary) site description (2.1, 2.2), past data collection activities (1.2), current status (2.4), project objectives (3.0, 4.6, 5.1), sample network design and rationale (4.0), and project schedule (5.3). Other sections may also apply.
42. **Section 2.0, PROJECT ORGANIZATION AND RESPONSIBILITY, Page 1:** Describe project responsibilities for the U.S. EPA Region 5 Remedial Project Manager and the U.S. EPA Region 5 Quality Assurance Reviewer.
43. **Section 2.0, PROJECT ORGANIZATION AND RESPONSIBILITY, Page 1:** Please include a Project Organization chart.
44. **Section 2.0, PROJECT ORGANIZATION AND RESPONSIBILITY, Page 1:** Please reference the Work Plan Section 5.4, Project Personnel (page 14-15), for additional information.
45. **Section 3.0, QUALITY ASSURANCE OBJECTIVES FOR MEASUREMENT DATA, Page 5:** The DQO Levels are being eliminated. See Comment 40 above. Discuss the Quality Control (QC) criteria for the field measurements of pH, temperature, conductivity, and field screening with the flame ionization detector (FID)/photo-ionization detector (PID) instrument.
46. **Section 3.1 Precision, Page 5:** Indicate the project QC acceptance criteria for precision for the matrices and parameters given in the Work Plan TABLE ONE.

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47. **Section 3.2, Accuracy, Page 5:** Indicate the project QC acceptance criteria for accuracy for the matrices and parameters given in Work Plan TABLE ONE. Tables in the Work Plan can be referenced.
48. **Section 3.3 Completeness, Page 6:** Please define the project completeness objective. The completeness objective is usually greater than 90%.
49. **Please include a section that discusses the Level of Quality Control Effort for field and laboratory analysis.** Please discuss the collection of MS/MSD samples for VOCs, Metals, and PCBs. Section 4.5 of the Work Plan should be referenced.
50. **Section 4.2, Item 1, Page 8:** The sample containers should meet the requirements presented in the *Specifications and Guidance for Contaminant-Free Sample Containers* EPA 540/R-93/051. Describe the special containers, vials with preservatives methanol and sodium bisulfate, for the VOC soil samples provided by GLA. Please reference the Work Plan, Section 4.3.1.
51. **Section 4.3, Ground Water Monitoring Well Installation and Sampling, Page 10:** Please refer to the Work Plan comments, nos. 24 and 25 above.
52. **Section 4.5, QA/QC Sampling, Page 13:** For aqueous matrices field blanks must be collected for every 10, or fewer number of samples. Field blanks are allowed, but not required, for soil/sediment matrices.
53. **Section 5.0, Custody Procedures, Page 15:** Please provide copies of the chain-of-custody, sample labels, sample tags, and seals.
54. **Section 5.0, Custody Procedures, Page 15:** Please stipulate the contents and location of the Final Evidence File.
55. **Section 6.1, Field Equipment, Page 17:** Please describe the calibration procedures for the field measurement of pH, temperature, and conductivity. Please reference the location of the field SOPs.
56. **Section 6.2, Laboratory Equipment, Page 17:** Please reference the location of the laboratory SOPs for the calibration of laboratory equipment.
57. **Section 7.0, ANALYTICAL SERVICES, Page 17-18:** Please correct the following typographical errors: For cyanide amend EPA Method 9021, to **9012**; and for mercury amend EPA Method 7421, to **7471**.
58. **Section 7.0, ANALYTICAL SERVICES, Page 17-18:** Please provide the standard operating procedures (SOPs) for the following SW-846 Methods:
 - 1) Method 8260B and soil preparation procedures (Method 5035) and aqueous preparation procedures (Method 5030B);

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- 2) Method 8082 and soil/sediment preparation method 3540C/3550B and any cleanup procedures (methods 3600C);
 - 3) Method 9012A;
 - 4) Method 7471A;
 - 5) Method 6010B and soil/sediment preparation method 3050B and aqueous preparation method 3005A/3010A; and
 - 6) Methods 7060A, 7421, and 7740, and aqueous preparation methods 3020B, 7060A, and 7740.
59. **Section 7.0, ANALYTICAL SERVICES, Page 17-18:** The project metal Tantalum (Ta) will be analyzed by the Method 6010A. This metal (Ta) is not included in the Method 6010A list. Therefore, method performance studies must be conducted to verify that Ta can be analyzed at the project required concentration level.
60. **Section 7.0, ANALYTICAL SERVICES, Page 17-18:** Please discuss the field measurement of pH, temperature, and conductivity and reference the location of the field SOPs.
61. **Section 8.1, Field Quality Control Checks, Page 18:** Please discuss the QC checks for field measurement of pH, temperature, and conductivity.
62. **Section 8.2, Laboratory Quality Control Checks, Page 18-19:** Please discuss the project required corrective actions. The SOPs provided by GLA should describe corrective actions for laboratory out of control events. See Comment nos. 45-49 above.
63. **Section 8.2, Laboratory Quality Control Checks, Page 19, last bullet:** The SW-846 Method 8000B (Section 7.10.4) specifies that when sample results are confirmed using two dissimilar columns or detectors, the higher result must be reported. The project should discuss with GLA how this situation will be dealt with, if it arises.
64. **Section 9.1, Field Data, Page 19:** Please discuss reduction procedures for pH, temperature, and conductivity.
65. **Section 9.2, Laboratory Data, Page 20:** Please itemize the project data reporting requirements expected from GLA. Specify the project QC acceptance criteria, used by the CEI QAO, for reviewing and validating analytical data from the laboratory.
66. **Section 9.3, Performance/System Audit, page 20:** This section is normally a separate QAPP Element entitled **PERFORMANCE AND SYSTEM AUDITS**. Please include a provision that external field audits may be conducted by the U.S. EPA Region 5. Please include a provision that external laboratory audits may be conducted by the U.S. EPA Region 5.

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67. **Section 9.4, Data Assessment, Page 21:** This section is normally a separate QAPP Element entitled **SPECIFIC ROUTINE PROCEDURES USED TO ASSESS DATA PRECISION, ACCURACY, AND COMPLETENESS**. Please discuss and include equations used to assess Accuracy, Precision, and Completeness.
68. **PREVENTATIVE MAINTENANCE:** This QAPP Element was not included or addressed. Please discuss preventative maintenance procedures for field instruments. The field SOPs can be referenced, if this information is found there. Discuss preventative maintenance procedures for laboratory instruments. The laboratory SOPs and GLA Quality Assurance Program (QAP) can be referenced, if this information is found there.
69. **Section 10.1, Corrective Action in the Field, Page 21:** Please correct the typographical error in the fifth line, i.e., amend QUO, to QAO.
70. **Section 11.0, QUALITY ASSURANCE REPORTS, Page 22:** Please discuss in more detail the contents of the QA Report, the official that prepares this report, and the persons that receive this report.

ATTACHMENT D - Great Lakes Analytical Quality Assurance Program

71. **Section 5.1, Sample Containers and Preservation, Page 11:** Provide more discussion on the preparation of the sample containers used and supplied for this project, ie, the soil VOC sample vials with the preservatives methanol or sodium bisulfate. The preparation of the vials should be consistent with the SW-846 Methods 5030B and 5035. Sample collection instructions may be included.
72. **Section 6.3, Sample Log-in, Page 12:** Provide more discussion on the internal chain-of-custody procedures.
73. **Section 6.5, Sample Storage, Page 13:** The VOC samples should be stored separately from other samples, as well as standards and extracts.
74. **Section 8.0, Analytical Quality Control, Page 15-23:** *Great Lakes Analytical* should provide the MDLs/PQLs/RLs (Section 8.4, Page 18), the established accuracy control limits (Section 8.6.2, Page 20), precision control limits (Section 8.6.3, Page 20), and surrogate control limits (Section 8.6.4, Page 21) for the analytical methods used in this project.

ATTACHMENT E - Site Health and Safety Plan

75. **Section 2.0, INTRODUCTION, Page 2:** It is not clear that the Health and Safety Plan (HASP) included with the Work Plan is the site HASP, because Section 10.5.3 (Health and Safety Plans, Page 23) states that a site specific health and safety plan will be prepared for each project. If this site investigation will essentially be one project, there should be one HASP for the site that covers all the activities planned.

76. **Section 3.4, Site Supervisor, Page 5-6:** It is recommended that the On-Site Safety Coordinator also have the authority to shut down operations at the site in the event of an emergency or unexpected hazardous situations.
77. **Section 3.5, Subcontractors, Page 6:** Subcontractors working on site must develop their own HASP in accordance with 29 CFR 1910.120 Appendix C, structured so that it will smoothly interface with the program of the principal contractor or site coordinator. Basically, the subcontractor will write a hazard analysis of their particular activities to be appended to the site HASP.
78. **Section 4.0, JOB HAZARD ANALYSIS, Pages 6-8:** A hazard analysis must be included in the HASP for each activity that will occur at the site. This includes physical hazards, chemical and biological hazards. For instance, Section 4.2.1 (Soil Boring and Sampling Activities, Pages 6 -7) references soil boring hazards as hazards associated with heavy machinery. The hazards must be defined more specifically, e.g., noise, dust, caught by turning auger, slips, trips, falls, splashed by, etc. Remedies could be site specific training, proper use of personal protective equipment (PPE), use of trained operators and operator helpers, and daily equipment inspections.
79. **Section 4.4, Heat and Cold Stress, Page 7:** Section 4.4 says heat stress monitoring should be done when personnel are wearing PPE. Will it be done, and if so, how will it be done? Section 5.4 (Heat and Cold Stress, Page 10) states heart rate can be used to monitor heat stress, but will it be mandated, and who is going to perform this function? Will cooling vests be available on-site? They are referenced in this HASP.
80. **Section 4.6, Dust Control and Spill Control, Page 8:** Who will determine if water is necessary to suppress dust, and how will it be determined?
81. **Section 4.7, Hearing Conservation, Page 8:** The HASP states that whenever noise exposure exceeds an 8-hour TWA of 85 dBA, a hearing conservation program will be employed. Section 5.5 states personnel will wear hearing protection whenever noise levels exceed 85 dBA. The Health and Safety Officer (HSO) will evaluate noise hazards with instrumentation, "if available." This reads that the HSO may or may not evaluate noise. How will the HSO know when 85 dBA is exceeded, and, if it is, how will the HSO know that the attenuation factor of the hearing devices used is sufficient to protect workers?
82. **Section 6.1, Respiratory Protection, Pages 13-14:** There must be a written respiratory protection program for the selection, use, and maintenance of the respirators which will be used at the site. The written program must be in accordance with 29 CFR 1910.134.
83. **Section 6.1, Respiratory Protection, Pages 13-14:** Employees should be medically evaluated to determine if they can safely wear respiratory protection before they are asked to wear these devices.

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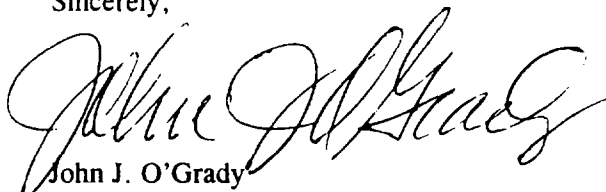
84. **Section 6.2.4, Level D Protection, Pages 15-16:** Section 6.2.4 states that PCB resistant gloves will be worn when site workers contact PCB contaminated soils. How will they know if they come into contact with PCB contaminated soils? PCBs were never identified as a site contaminant in this HASP.
85. **Section 8.4, Equipment Decontamination, and Section 8.5, Personal Protective Equipment Decontamination, Pages 19-20:** What will be done with decontamination fluids? PPE will be bagged and drummed, but there is no description on how decon fluids will be handled.
86. **Section 9.0, SITE MONITORING, Pages 20-21:** The site monitoring Section 9.0 must go into much greater detail. It must describe specific instruments that will be used, how, when and where it will be used, and how and when it will be calibrated. Records must be maintained on all repairs, calibrations, and readings.
87. **Section 9.1, Air Monitoring, Page 20:** Relying on odor to detect TCE as a prerequisite for air monitoring is not a prudent safety practice. TCE is a potential carcinogen having a Threshold Limit Value (TLV) of 50 ppm, a Recommended Exposure Limit (REL) of 25 ppm, and a lower odor threshold of 21.4 ppm. Many workers could be working in concentrations of TCE exceeding the REL or TLV before they ever smell it!
88. **Section 9.3, Noise Monitoring, Page 20:** Section 9.3 states noise monitoring will be conducted, but there is no description on how it will be conducted, when, or where.
89. **Section 12.0, EMERGENCY PROCEDURES, Pages 24-25:** The Emergency Procedures section needs additional information. There must be a detailed site map depicting site topography, buildings, landmarks, work zones, etc. It must also depict emergency routes of egress. There must be a list of emergency equipment that will be available at the site, and a statement as to where the emergency equipment will be located. The HASP should be made available to emergency responders, before activities begin, if they will be summoned for site emergencies per 29 CFR 1910.38(a). If site personnel will be required to respond to site emergencies, an Emergency Response Plan must be developed in accord with 29 CFR 1910.120(l)(2). There must be a description of the site communications system(s) that will be available for on and off site communications. There must be provisions for accident/illness investigations and reporting.
90. **ATTACHMENT A, SITE AND HOSPITAL LOCATION MAP:** The map to the hospital is illegible. Also, the hospital must be notified of the activities at the site, the numbers of personnel, chemical hazards, etc., before operations begin.
91. **ATTACHMENT B, CHEMICAL INFORMATION:** A Hazard Communication Plan for the site must be written in accordance with 29 CFR 1910.1200. Material safety data sheets must be available for all chemicals brought on site such as: decontamination chemicals, gasoline and other fuels, equipment calibration gases, etc.

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92. **ATTACHMENT C, CONTRACTOR CERTIFICATION:** Self-audit site inspection and abatement tracking programs must be formalized and effectively implemented.

Upon receipt of this letter, please contact me to discuss a firm date for submittal of the EE/CA Work Plan. If you have any questions, I can be reached at (312) 886-1477.

Sincerely,

A handwritten signature in cursive script, appearing to read "John J. O'Grady".

John J. O'Grady
Remedial Project Manager
Superfund Division

cc: T. Krueger, U.S. EPA Region 5 Office of Regional Counsel (C-14J)

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bcc: A. Baumann, U.S. EPA Region 5 (SRT-4J)
R. Byvik, U.S. EPA Region 5 (SRT-4J)
R. Nagam, Ecology and Environment